Part 8 · Number Search & Magic Square

Work out each answer below, then find it hidden in the digit grid — across, down, diagonally or backwards.

1. The larger two-digit number in the reversal puzzle (Example 10)
2. The smaller two-digit number in the reversal puzzle (Example 10)
3. Sum of a number and its digit-reversal (Example 10)
4. Monthly income of the first person (Example 8)
5. Monthly income of the second person (Example 8)
6. Monthly saving of each person (Example 8)
7. Age of Aftab's daughter (Example 5)
8. x-coordinate of B where the lines of Example 1 intersect

8	0	2	3	2	8	8	3	5	8	1	1	4	6
4	1	8	7	9	2	6	8	5	0	6	5	9	0
5	2	0	7	5	9	0	6	3	1	8	3	3	8
5	0	4	1	4	3	9	8	8	8	2	4	4	5
5	2	5	1	9	9	4	5	0	0	5	0	7	4
7	0	3	4	1	4	1	7	0	9	0	9	8	2
6	7	6	9	6	4	2	3	0	0	0	8	1	2
4	2	1	3	0	8	0	4	5	5	0	0	2	4
6	1	4	4	6	7	1	0	8	1	2	8	3	3
8	4	9	2	4	0	7	9	0	6	7	3	8	6
8	7	1	7	3	3	7	5	3	5	9	0	9	9
8	6	0	5	9	2	8	3	9	5	5	2	3	4
6	5	7	9	6	6	1	8	1	8	2	0	3	9
8	2	7	7	7	8	2	8	8	7	1	7	0	4

☐ 18000	☐ 14000	☐ 2000	☐ 42	☐ 24
☐ 66	☐ 12	☐ 6		

Magic Square — every row, column and diagonal adds to the same total.

8		
3	**5**	

4		**2**

Magic constant: 15. Fill the empty cells.

Concept Bingo

Fill the empty grid below with any 16 terms from the bank — in any order, one per box. Then work down the clue list: each clue describes one term without naming it. Cross off a box only when you are sure which term its clue is describing. Get four crossed in a row, column or diagonal and you have bingo.

Term bank — choose any 16:

Substitution	Elimination	Consistent	Inconsistent
Intersecting	Parallel	Coincident	Dependent
Unique Solution	Graphical Method	Ratio Test	General Form
Linear Equation	Coefficient	Infinitely Many	No Solution
Two Variables	Simultaneous Equations	Straight Line	True Statement

Your bingo card:

Clue list — read each clue and find the term it describes:

① Algebraic method: express one variable in terms of the other, then plug in.
② Algebraic method: make coefficients equal, then add or subtract them away.
③ A pair of equations that has at least one solution.
④ A pair of equations that has no solution.
⑤ Lines that cross at exactly one point.
⑥ Lines that never meet, giving no solution.
⑦ Lines that lie exactly on top of each other.
⑧ Describes a pair whose lines are coincident — always consistent.
⑨ What intersecting lines give — exactly one answer.
⑩ Solving by plotting points and drawing lines on graph paper.
 Comparing a1/a2, b1/b2, c1/c2 to classify a pair without graphing.

- The form ax + by + c = 0.
- An equation whose graph is a straight line.
- The number multiplying x or y in a linear equation.
- What coincident lines give — every point on the line is a solution.
- What parallel lines give — the pair is inconsistent.

*Two lines, three possible relationships, one ratio test to tell them apart — and two clean algebraic methods when a graph will not give you an exact answer. That is the whole chapter. *